

**SYSTEM AND METHOD FOR DELIVERING  
INFORMATION AT INACCESSIBLE LOCATIONS**

**CROSS-REFERENCE TO RELATED APPLICATION**

5        This application is a continuation-in-part of United States Patent Application  
Serial No. 09/481,577, filed on January 12, 2000.

**BACKGROUND**

**I.        Field of the Invention**

10        The present invention relates generally to the delivery of information, and  
more particularly to a system and method for delivering information related to an  
inaccessible location to individuals at the inaccessible location.

**II.        Description**

15        In common occurrence, many notable locations are physically removed from  
easily accessible sources of power and/or communication, such as electrical outlets  
and wireline telephone jacks. This is particularly true in the case of cemeteries,  
historically significant locations, dedication or donation plaques, and outdoor, as well  
as some indoor, equipment. Consequently, it is difficult to place information about  
20        the notable locations and/or instructions in close proximity thereto and to revise that  
information once so placed.

In the case of cemeteries, friends and loved ones typically place memorial and/or genealogical information such as name, date born, date passed, notable accomplishments, parents, siblings, children, etc., about the deceased party directly on the tombstone or other graveyard marker. Friends and loved ones also sometimes place photographs of the deceased and/or the family of the deceased on or nearby the tombstone or other graveyard marker that may or may not have been weatherized in some form or another.

In the case of historically notable locations, interested parties typically place signs, placards, photographs, artist's renderings, etc., about the historically notable location, that may or may not have been weatherized, in close proximity to the notable location. Occasionally, interactive tape recordings and/or videos are placed in close proximity to the notable location.

In the case of dedication or donation plaques, interested parties typically place memorial and/or historical information such as name, date of dedication, date of donation, notable accomplishments, etc., about the donating party directly on the plaque or other marker.

In the case of outdoor, and inaccessible indoor, equipment, interested parties typically place manuals, warranties, instructions, etc., about the equipment that may or may not have been weatherized in some form or another, or that may or may not have been treated for extreme indoor conditions, or that may or may not have been, for example, sterilized for certain applications.

In any event, whether the inaccessible location is a cemetery location, historically notable location, dedication or donation plaque, indoor or outdoor equipment, or some other notable but remote or inaccessible location, the need for the information and any equipment necessary for accessing that information to both 5 withstand the weather conditions likely encountered at the location and any attempts to remove them from the location without authorization severely limits both the amount and types of information that may be placed at the remote location with current systems.

10 Accordingly, there is a need for a system and method of placing and communicating large quantities and varied types of information at inaccessible locations that can withstand the conditions and attempts to remove that information likely to be encountered at the remote location.

15 **SUMMARY OF THE INVENTION**

The present invention is directed to a system and method for delivering 20 information related to a remote and/or inaccessible location at the inaccessible location. In one embodiment, the invention comprises a system for providing information related to an inaccessible location comprising a memory device affixed to the inaccessible location, the information residing on the memory device; and a portable memory reading device, separate from the memory device, that retrieves the information from the memory device when positioned at the inaccessible location, wherein the portable memory reading device communicates the information to a party

located at the inaccessible location. In another embodiment, the invention comprises a system for providing information related to an inaccessible location comprising a memory device affixed to a physical object at the inaccessible location, the information residing on the memory device; a portable memory reading device, separate from the memory device, that retrieves the information from the memory device when positioned at the inaccessible location and communicates the information to a party located at the inaccessible location; and a database wherein the information residing on the memory device is replicated; and wherein the memory device is uniquely associated with an identifying code.

In yet another embodiment, the invention comprises a system for providing historical information about a historically notable location comprising a memory device affixed to a physical object positioned at the historically notable location, the historical information residing on the memory device; and a portable memory reading device, separate from the memory device, that retrieves the historical information from the memory device when positioned at the historically notable location and communicates the historical information to a party located at the historically notable location. In a still further embodiment, the invention comprises a system for providing memorial information about a deceased party interred at a cemetery location comprising a memory device affixed to a physical object positioned at the cemetery location, the memorial information residing on the memory device; and a portable memory reading device, separate from the memory device, that retrieves the memorial information from the memory device when positioned at the cemetery

location and communicates the memorial information to a party located at the cemetery location.

In yet another embodiment of the invention, the invention comprises a system for providing dedication or donation information for a substantially complete

5 explanation about the reasons for the gift at any location, such as a hospital, comprising a memory device affixed to a physical object positioned at the location, the dedication or donation information residing on the memory device; and a portable memory reading device, separate from the memory device, that retrieves the dedication or donation information from the memory device when positioned at the 10 location and communicates the dedication or donation information to a party located at the location. In a still further embodiment, the invention comprises a system for providing instructions, manuals, and/or warranty information about indoor or outdoor equipment, such as a lawn tractor, at any location, comprising a memory device affixed to the equipment positioned at any location, the instructions, manuals, and/or 15 warranty information residing on the memory device; and a portable memory reading device, separate from the memory device, that retrieves the instructions, manuals, and/or warranty information from the memory device when positioned at the location and communicates the instructions, manuals, and/or warranty information to a party located at the location.

20 In yet another embodiment of the invention, the invention comprises a method for providing information related to an inaccessible location, comprising the steps of storing the information on a memory device, the information being stored in a format

that can be retrieved from the memory device and displayed to a party with a portable memory reading device, separate from the memory device, when the portable memory reading device is in close proximity to the memory device; and affixing the memory device to a physical object positioned at the inaccessible location.

5       Additional steps in the method may include replicating the information stored on the memory device in a database; revising the replicated information at the database, and communicating the revised replicated information to the memory device over a communicable connection between the database and the memory device; and/or providing the replicated information over a communications medium upon receipt by the database of an identifying code, the identifying code being uniquely associated 10      with the memory device having the information stored thereon.

Therefore, the present invention provides a system and method of placing and communicating large quantities and varied types of information at inaccessible locations, that can withstand the conditions and attempts to remove that information 15      likely to be encountered at the inaccessible location.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

The features, objects and advantages of the present invention will become more apparent from the detailed description set forth below when taken in conjunction with the drawings, in which like reference characters identify corresponding elements throughout, and wherein:

Figure 1 is a block diagram of a system for providing information related to an inaccessible location in accordance with a first preferred embodiment of the invention.

5 Figure 2 is a block diagram of a system for providing information related to an inaccessible location in accordance with a second preferred embodiment of the invention.

10 Figure 3 is a block diagram of a system for providing information related to an inaccessible location in accordance with a third preferred embodiment of the invention.

15 Figure 4 is a block diagram of a system for providing information related to an inaccessible location in accordance with a fourth embodiment of the invention.

Figure 5 is a block diagram of a system for providing information related to an inaccessible location in accordance with a fifth embodiment of the invention.

15 Figure 6 is a block diagram of a system for providing information related to an inaccessible location in accordance with a sixth embodiment of the invention.

#### **DETAILED DESCRIPTION OF THE INVENTION**

It is to be understood that the figures and descriptions of the present invention have been simplified to illustrate elements that are relevant for a clear understanding of the present invention, while eliminating, for purposes of clarity, many other elements found in a typical information delivery system. Those of ordinary skill in the art will recognize that other elements are desirable and/or required in order to

implement the present invention. However, because such elements are well known in the art, and because they do not facilitate a better understanding of the present invention, a discussion of such elements is not provided herein.

Referring to Figure 1, there is shown a block diagram of an information generator 1 for providing information related to inaccessible locations in accordance with preferred embodiments of the invention. A number of locations 2-3 in a cemetery 10 have memory devices 2B-3B permanently affixed to tombstones 2A-3A at locations 2-3 respectively. Cemetery 10 may comprise a catacomb, cinerarium, crypt, mausoleum, ossuary, sepulcher, tomb, vault, or any other location where a deceased party may be laid to rest either temporarily or permanently. A deceased party may comprise any living organism that has passed, including but not limited to human beings that have passed. Tombstones 2A-3A may comprise any type of physical object used to mark the locations 2-3 of deceased parties within cemetery 10. Memory devices 2B-3B have memorial and/or genealogical information about the deceased party interred at locations 2-3 stored therein or thereon. This information may comprise any information related to the deceased party that a friend or loved one may find interesting including, but not limited to the name, date born, date passed, notable accomplishments, parents, siblings, children, etc., of the deceased party as well as photographic and artistic images of or relating to the deceased party.

In preferred embodiments of the invention, memory devices 2B-3B comprise contact memory devices, and each memory device may be uniquely associated with an identifying code. Contact memories generically comprise physical devices that

attach directly to an object and can be read through active or passive contact with a reading device. Typically contact memories are approximately the size of a clothing button, and comprise a stainless steel container housing a small memory chip inside. Information can usually be written to the contact memory through temporary active or passive contact with the contact memory as well. In preferred embodiments of the invention, memory devices 2B-3B comprise an iButton® contact memory device, the mechanical and technical standards for which are available at <http://www.ibutton.com/ibuttons/standard.pdf>, and are incorporated herein by reference. Memory devices 2B-3B may also comprise, in addition to contact memories, read only memory (ROM) devices, electronically erasable programmable read only memory (EEPROM) devices, electronically programmable read only memory (EPROM) devices, random access memory (RAM) devices, static random access memory (SRAM) devices, static bar codes, or any other device that is small in size, can be easily and permanently attached to a physical object, can store large quantities and varied types of information, and can withstand extreme weather conditions without losing or damaging the information stored therein and/or thereon. The information is stored in and/or on the memory device in a format suitable for the type of memory device used, extensible markup language or hypertext markup language comprising the preferred format.

Referring still to Fig. 1, system 1 further comprises a portable memory reading device 5. Portable memory reading device 5 may comprise a special purpose computer, a portable general purpose computer such as a laptop computer, or any

other type of portable computerized device, including a hand-held portable computer, a wireless communications device, and/or a smart wireless communications device, that has the ability to read, receive, and/or display all or a portion of the information stored on memory devices 2B-3B when placed at locations 2-3 or in close proximity to memory devices 2B-3B. Typically, portable memory reading device 5 will have an integrated means of reading, receiving, and/or writing information from or to memory devices 2B-3B. In other cases, portable memory reading device 5 may have a hand-held probe attached thereto through some type of serial and/or parallel electrical connection for reading, receiving, and/or writing information from and/or to memory devices 2B-3B. The precise means of reading, receiving, and/or writing of the information employed is a matter of design choice and will necessarily depend on the type of memory device 2B-3B employed. Where the memory devices 2B-3B employed are contact memories, a preferred means of reading and/or writing comprises a single signal plus ground probe, whether integrated or hand-held, configured to an input/output line of a microcomputer.

Referring now to Fig. 2, there is shown a block diagram of a system 20 for providing information related to an inaccessible location 21 in accordance with a second preferred embodiment of the invention. System 20 comprises a memory device 2B permanently affixed to post 21A located at historically notable location 21, and portable memory reading device 5. Memory device 2B and portable memory reading device 5 comprise the same elements as in system 1 described above, except that the information stored in and/or on memory device 2B comprises historical

information about historically notable location 21. Post 21A comprises a stake anchored to the ground at historically notable location 21, but may also comprise a sign, lamppost, doorframe, fencepost, cannon, or any other physical object, whether stationary or movable and whether permanent or temporary, located at or near historically notable location 21. Historically notable location 21 comprises any location physically removed from convenient access to electrical and/or wireline telephone service that a person may find historically interesting because of events that have occurred, are occurring, or may be occurring in the future, and historically notable information comprises any information about the events that have occurred, are occurring, or may be occurring at inaccessible location 21 in the future.

Referring now to Fig. 3, there is shown a block diagram of a system 300 for providing information related to an inaccessible location 340 in accordance with a third preferred embodiment of the invention. An inaccessible location is a location that cannot easily be wired for electricity and/or electronic communication. System 300 comprises a memory device 2B affixed, such as permanently affixed, to equipment 320, such as an automobile or a lawn tractor, or indoor equipment, such as a television or a stereo, located at any inaccessible location 340, and portable memory reading device 5. Memory device 2B and portable memory reading device 5 preferably comprise the same elements as in system 1 described above, except that the information stored in and/or on memory device 2B includes, but is not limited to, instructions, such as manuals, and/or warranty information, about the equipment 320. As shown, equipment 320 comprises, for example, outdoor equipment in the form of

a lawn tractor at location 340, but may also comprise, for example, snow blowers, mulchers, tillers, or any other physical object, whether stationary or movable, and whether permanent or temporary, located at or near location 340. Location 340 comprises any location physically removed from convenient access to electrical and/or wireline telephone service, and instructions, manuals, and/or warranty information comprises any information about the equipment at inaccessible location 340.

Referring now to Fig. 4, there is shown a block diagram of a system 400 for providing information related to an inaccessible location 440 in accordance with a fourth preferred embodiment of the invention. System 400 comprises a memory device 2B affixed, such as permanently affixed, proximate to, i.e. on or near, a dedication or donation plaque 420 or art piece 420 located at any inaccessible location 440, and portable memory reading device 5. As used herein, plaque includes any device, item, piece, or mechanism capable of signifying, for example, a donor's donation, and, as used herein, a dedication or donation would include the generator of the dedication, such as the painter of a painting, or the donator of a painting. Memory device 2B and portable memory reading device 5 comprise the same elements as in system 1 described above, except that the information stored in and/or on memory device 2B comprises dedication or donation information, including a substantially complete story about why the gift was given by the donating party to location 440, such as a hospital, or how a gift was created, such as the artist who created artwork. A dedication or donation plaque 420 comprises a sign at location 440 as illustrated,

but may also comprise a photograph, engraving, drawing, painting, or any other physical object, whether stationary or movable and whether permanent or temporary, located at or near location 440. Location 440 comprises any location physically removed from convenient access to electrical and/or wireline telephone service, and dedication or donation information comprises any information about the donating party at inaccessible location 440.

Referring now to Fig. 5, there is shown a block diagram of a system 30 for providing information related to an inaccessible location 21 in accordance with a fifth preferred embodiment of the invention. System 30 comprises memory device 2B, 3B, and 2B' permanently affixed to tombstones 2A and 3B and post 21A respectively, tombstones 2A-3A located in cemetery 10 and post 21A located at historically notable location 21, portable memory reading devices 5 and 5', and database 31 communicably connected 32 to memory devices 2B, 3B, and 2B'. Memory devices 2B, 3B, and 2B', tombstones 2A-3A, post 21A, historically notable location 21, and portable memory reading devices 5 and 5' comprise the same elements as in systems 1 and/or 20 described above. Database 31 comprises a single or central database wherein the information stored in and/or on memory devices 2B, 3B, and/or 2B' is replicated in whole or in part, or a plurality of distributed databases wherein the information stored in and/or on memory devices 2B, 3B, and/or 2B' is replicated in whole or in part.

Referring back to Fig. 3, there is shown a block diagram of a system 300 for providing information related to an inaccessible location 340. System 300 may

comprise memory device 2B permanently affixed to equipment 320, such as a lawn  
tractor, portable memory reading devices 5, and database 31 communicatively  
connected 32 to memory reading device 5. Memory device 2B, equipment 320,  
location 340, and portable memory reading device 5 comprise the same elements as in  
the systems described hereinabove. Database 31 comprises a single or central  
5 database wherein the information stored in and/or on memory device 2B is replicated  
in whole or in part, or a plurality of distributed databases wherein the information  
stored in and/or on memory devices 2B is replicated in whole or in part.

Referring now to Fig. 4, there is shown a block diagram of a system 400 for  
10 providing information related to an inaccessible location 440. System 400 may  
comprise memory device 2B permanently affixed to plaque 420, plaque 420 located  
in an inaccessible location 440, such as a hospital or any other building, portable  
memory reading device 5, and database 31 communicatively connected 32 to memory  
device 2B. Memory device 2B, plaque 420, inaccessible location 440, and portable  
memory reading device 5 comprise the same elements as in the systems described  
15 hereinabove. Database 31 comprises a single or central database wherein the  
information stored in and/or on memory device 2B is replicated in whole or in part, or  
a plurality of distributed databases wherein the information stored in and/or on  
memory device 2B is replicated in whole or in part.

20 In the case where database 31 comprises a plurality of distributed databases,  
the plurality of databases may be connected to one another via an internet connection,  
limited or wide area network connection, or some other type of suitable

communicable connection or combination of connections as would be known in the art, and the information stored in and/or on memory devices 2B, 3B, and/or 2B' may be replicated on each or some lesser number of the databases in the plurality. The communicable connection 32 to memory devices 2B, 3B, and/or 2B' may comprise an internet connection, a limited and/or wide area network connection, a wireless communications connection, a wireline telephone connection, or some other type of suitable communicable connection or combination of connections as would be known in the art. The replicated information residing on database 31 may be revised at database 31 and the revised replicated information communicated to memory devices 2B, 3B, and/or 2B' over communicable connection 32.

In certain embodiments of the invention in system 30, 300, and 400, communicative connection 32 need not comprise a permanent communicative connection, as in the case where the information residing on memory devices 2B, 3B, and/or 2B' may be overwritten with portable memory reading device 5 and/or 5'. In those embodiments, revised replicated information may be transferred from database 31 to portable memory reading device 5 and/or 5' over a suitable connection and subsequently read to memory devices 2B, 3B, and/or 2B' when memory reading device 5 and/or 5' is placed in close proximity to memory devices 2B, 3B, and/or 2B'.

In still further embodiments of system 30, 300, and 400, users of the system may utilize the identifying codes that are uniquely associated with memory devices 2B, 3B, and/or 3B' to access the replicated information residing on database 31 either

with or without the use of memory reading device 5 and/or 5', depending on the type  
of devices employed as memory reading device 5 and/or 5'. A user of the system  
accesses database 31 through an internet with a browser or some other suitable form  
of software, a telephone connection, including wireless telephone connections, or any  
other type of suitable communications medium or combination of mediums as would  
5 be known in the art, provides the identifying code for the inaccessible location 2, 3,  
and/or 21 he or she is interested in receiving information about, and database 31  
provides the replicated information corresponding to inaccessible location 2, 3, and/or  
21 to the user over the communication medium employed upon receipt of the  
identifying code.

10 Referring now to Fig. 6, there is shown a block diagram of a system 40 for  
providing information relate to inaccessible locations in accordance with a sixth  
embodiment of the invention. System 40 comprises locations 2 and 3 within  
cemetery 10, historically notable location 21, plaque location 440, equipment location  
15 340, memory reading devices 5 and 5', database 32, communication links 42 between  
memory reading devices 5 and 5' and database 32, the Global Positioning System  
(GPS) infrastructure 41, and GPS signals 43. Locations 2 and 3, cemetery 10,  
historically notable location 21, plaque location 440, equipment location 340,  
20 memory reading devices 5 and 5', and database 32 comprise the same elements as in  
systems 1, 20, and/or 30 described above. In system 40 though, memory reading  
devices 5 and 5' also comprise GPS receivers, and preferably wireless  
communications devices or smart wireless communications devices with GPS

receivers integrated therein. Communication links 42 comprise the same types of connections a user would employ to access database 32 in system 30, 300, and 400. When memory reading device 5 or 5' is positioned near cemetery location 2 or 3, historically notable location 21, plaque location 440, or equipment location 340, 5 memory reading device 5 or 5' determines its position on the surface of the earth through the use of GPS signals 43 transmitted by GPS system infrastructure 41, accesses database 32 via communication links 42, and communicates its GPS position to database 32. Database 32 determines the inaccessible location associated with the GPS position received from memory reading device 5 or 5' via communication links 42, in this case cemetery location 2 or 3 or historical location 21, and communicates 10 the information related to inaccessible locations 2, 3, and/or 21 to memory reading device 5 or 5' over communication links 42. The information may then be displayed or communicated to a user of system 40 located at or near inaccessible location 2, 3, and/or 21. In some embodiments of the invention, a user of system 40 may be required to initiate access to database 32 over communication links 42, and/or may be 15 required to provide an identification number, code or password before the information related to inaccessible location 2, 3, and/or 21 can be accessed by and/or communicated to memory reading device 5 or 5'.

In any embodiment of the invention, including the embodiments shown and 20 described above, the information related to an inaccessible location may also comprise, in addition to information specifically related to the inaccessible location, data, symbols, codes, and/or other information not specifically related to the

inaccessible location that may be used to access the information specifically related to the inaccessible location, whether resident on a memory device at an inaccessible location or a database located somewhere other than the inaccessible location.

Moreover, the inaccessible locations where the invention may be employed are not limited to cemetery and historically notable locations, but may comprise any location that a person may find notable that is physically removed from easily accessible sources of power and communication, regardless of whether the climatic conditions likely encountered would be considered extreme. Thus, systems and methods for providing information related to an inaccessible location have been shown and described. Users of the systems and methods have the ability among other things to store, receive, and/or revise the information related to the inaccessible location in a number of ways.

The foregoing description of the preferred embodiments is provided to enable any person skilled in the art to make or use the present invention. Various modifications to the embodiments described above however will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments without the use of inventive faculty. Thus, the present invention is not intended to be limited to the specific systems and methods shown herein but is to be accorded the widest scope consistent with the claims set forth below.